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By- Zimmer, John M.; Manny, Elsie S.

Population Characteristics of Farm Operator Households.

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A 1968 analysis used 1964 data to compare all U.S. farm operator households on the bases of age, color, sex, educational attainment, and size of farm business (gross sales). In addition, 30 counties were selected for special income data study. Results from both studies indicated that relatively deprived farm operator households were: (1) composed of more older people; (2) disproportionately non-white (though the larger proportion was white); (3) educationally disadvantaged, and (4) concentrated in certain regions of the country. Evidence suggested that these disadvantaged families were appropriate recipients of anti-poverty aid, but due to large variations in farm operator households any economic or social development program for farm operator families should be carefully designed to include only those in need to avoid antagonizing those families above average in their annual incomes. (DA)

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POPULATION CHARACTERISTICS OF FARM OPERATOR HOUSEHOLDS

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HIGHLIGHTS

The U.S. county average farm operator level-of-living index rose from 100 in 1959 to 122 in 1964.

Counties with the highest level-of-living indexes have a larger proportion of persons in the productive age groups than counties with the lowest indexes.

Counties in the fourth and fifth quintiles have a larger proportion of persons 65 years old and over than the counties in the higher quintiles.

Although level-of-living indexes of many southern counties have risen decidedly in recent years, about 93 percent of counties in the lowest quintile remain in the South.

Counties in the fourth and fifth quintiles contain 85 percent of the non-white persons in farm operator households.

In each quintile the proportion of males and females is about equal, with a slightly larger proportion of females in the fourth and fifth quintiles.

The percentage of persons in farm operator households 25 years of age and over who have completed 12 years of school declines from 38 percent in the counties with the highest indexes to 15 percent in those with the lowest.

In counties with the highest indexes, only 8 percent of the persons 25 years and over have completed less than 8 years of school, but 37 percent have completed less than 8 years in counties with the lowest indexes.

Over half of the part-time farms and 59 percent of the part-retirement farms are in counties in the fourth and fifth quintiles.

For the 30 counties studied in detail, per capita farm income is $15,340 in counties with the highest indexes, $1,170 in those with average indexes, and $293 in counties with the lowest indexes.

In the 30 selected counties, net farm income per household in those of the first quintile is more than 12 times higher than that of those with average indexes and more than 46 times higher than that of counties in the fifth quintile.

POPULATION CHARACTERISTICS OF FARM OPERATOR HOUSEHOLDS

By John M. Zimmer and Elsie S. Manny
Economic Development Division
Economic Research Service

INTRODUCTION

This report analyzes selected characteristics of persons in U.S. farm operator households in relation to the 1964 farm operator level-of-living index. These characteristics include age, color, sex, educational attainment of persons in these households, and size of farm business in terms of gross sales. Income data are analyzed for 30 counties selected for special study. The relationship of various characteristics of the population to level of living is a factor relevant to economic and social development programs.

Farm operator level-of-living indexes for counties in the United States have been published in a series of reports. The latest ones were developed from 1964 Census of Agriculture data for regions, geographic divisions, States, State economic areas, and counties or combinations of counties. 1/ They are based on a 1959 U.S. county average index of 100. The U.S. county average index for 1964 was 122 (figure 1).

For this study, all U.S. counties with farms in 1964, based on the 1964 level-of-living indexes, were divided into quintiles for comparison of groups of counties at various index levels. Ranking of counties is in descending order; counties with the highest indexes were placed in the first quintile and those with the lowest were placed in the fifth quintile. Although the quintile rank of many counties shifted between 1959 and 1964, the West continues to have the largest proportion of counties in the first quintile and the South the largest proportion in the fifth quintile.

TOTAL POPULATION

Age

In 1964, 11,229,000 persons, about 5.8 percent of the estimated total U.S. population, lived in the households of farm operators. In general, the total population of these households consists of more children of school age, more middle-aged adults, and fewer young adults than the U.S. total population.

Compared with the U.S. total population, the population of farm operator households in each quintile of counties has a substantially smaller percentage

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1/ Zimmer, John M., and Manny, Elsie S. Farm Operator Level-of-Living Indexes for Counties of the United States, 1950, 1959, and 1964. U.S. Dept. Agr. Statis. Bul. 406, June 1967.

FARM OPERATOR LEVELS OF LIVING, 1964

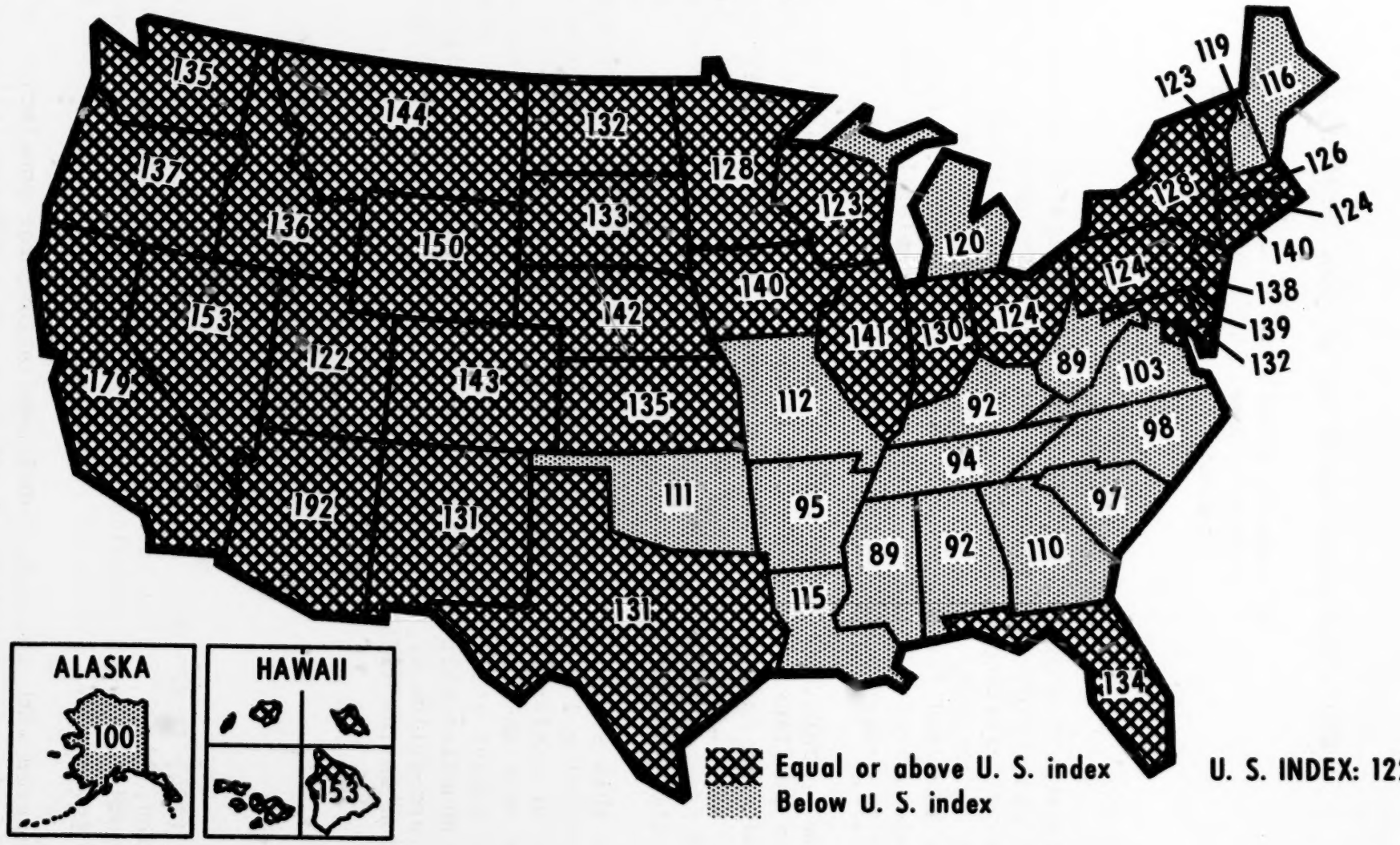

Figure 1

of young adults between the ages of 20 and 34 (table 1). Consequently, the counties of each quintile also have a significantly lower proportion of children under 5 years of age than the United States as a whole.

Of the total farm operator household population, the proportion of children between the ages of 5 and 10 in the counties of the first three quintiles approximates the proportion in the U.S. population. The percentage in the counties of the fourth and fifth quintiles is smaller than that in the U.S. population. In contrast, persons between the ages of 10 and 19 in counties in each of the quintiles constitute a larger proportion of the total farm operator household population than they do of the population of the United States as a whole.

Adults between the ages of 45 and 54, those likely to be the parents of persons between 10 and 19 years of age, comprise a larger proportion of the population in each quintile than that in the total U.S. population. In the counties of the first three quintiles, the percentage of adults 35 to 44 years of age is larger than the national average for this age group, but in counties of the fourth and fifth quintiles it is smaller.

The proportion of the farm operator population 55 to 64 years of age is substantially higher in each quintile than that of persons of this age in the total U.S. population. Counties of the third, fourth, and fifth quintiles have a larger proportion 65 years of age and over than that in the Nation as a whole. In those counties comprising the upper 40 percent of the index, these older persons account for smaller percentages of the farm operator household population than they do of the U.S. total population.

Color

Only 8 percent of all persons in farm operator households are nonwhite, 57 percent of which reside in counties of the fifth quintile (table 2). Only 15 percent reside in the counties of the first, second, and third quintiles. This 15 percent consists largely of nonwhite persons other than Negroes living in western States. Although farm operator level-of-living indexes for many counties in the South have risen decidedly, about 93 percent of the counties in the fifth quintile remain in the South. The larger proportion of white persons in farm operator households is evenly distributed among the first three quintiles.

Sex

The difference in the percentage of males and females in farm operator households in each quintile varies less than 1 percent (table 2). In the first three quintiles, the proportion of males is slightly higher than that of females, but in the two remaining quintiles the proportion of females is greater. This may indicate that widows in low-income areas are more apt to remain on the farm.

Table 1.--Number and percentage distribution of persons, by age group , in farm operator households in each quintile of counties, conterminous United States, 1964

Quintiles of counties	Total number of persons	Age group									
		Under 5 years	5-9 years	10-14 years	15-19 years	20-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and over
All counties:											
Number (thou.)	11,229	829	1,118	1,384	1,139	381	864	1,449	1,695	1,354	1,017
Percent 1/	100.0	7.4	10.0	12.3	10.1	3.4	7.7	12.9	15.1	12.1	9.0
First quintile:											
Number (thou.)	2,206	176	232	278	214	70	183	309	339	247	160
Percent	100.0	8.0	10.5	12.6	9.7	3.1	8.3	14.0	15.3	11.2	7.3
Second quintile:											
Number (thou.)	2,389	201	261	304	233	79	195	315	348	265	187
Percent	100.0	8.4	11.0	12.7	9.8	3.3	8.1	13.2	14.6	11.1	7.8
Third quintile:											
Number (thou.)	2,309	176	235	287	231	77	175	297	340	273	217
Percent	100.0	7.6	10.2	12.5	10.0	3.3	7.6	12.9	14.7	11.8	9.4
Fourth quintile:											
Number (thou.)	2,068	133	185	241	211	71	150	261	327	274	215
Percent	100.0	6.4	8.9	11.7	10.2	3.5	7.3	12.6	15.8	13.2	10.4
Fifth quintile:											
Number (thou.)	2,247	143	205	273	248	84	161	266	389	293	235
Percent	100.0	6.4	9.1	12.1	11.0	3.7	7.2	11.8	15.1	13.1	10.5
Total U.S. population 2/:											
Number (thou.)	192,119	20,691	20,347	18,435	16,329	13,152	22,313	24,561	21,758	16,676	17,857
Percent	100.0	10.8	10.6	9.6	8.5	6.8	11.6	12.8	11.3	8.7	9.3

1/ Percentages do not always equal 100 because of omission of some counties for which level-of-living indexes were not obtained.
2/ U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 321, Nov. 30, 1965.

Table 2.--Number and percentage distribution of all persons, by color and sex, in farm operator households in each quintile of counties, conterminous United States, 1964

Quintiles of counties	Persons in farm operator households		White		Nonwhite		Male		Female	
	Number	As percentage of total	Number	As percentage of total	Number	As percentage of total	Number	As percentage of total	Number	As percentage of total
	Thou.	Pct. 1/	Thou.	Pct.	Thou.	Pct.	Thou.	Pct.	Thou.	Pct.
All counties	11,229	100.0	10,364	100.0	866	100.0	5,852	100.0	5,377	100.0
First quintile	2,206	19.6	2,172	21.0	35	4.0	1,153	19.7	1,053	19.6
Second quintile	2,389	21.3	2,364	22.8	25	2.9	1,256	21.5	1,133	21.1
Third quintile	2,309	20.6	2,235	21.6	74	8.5	1,210	20.7	1,099	20.4
Fourth quintile	2,068	18.4	1,828	17.6	240	27.7	1,071	18.3	997	18.5
Fifth quintile	2,247	20.0	1,755	16.9	492	56.8	1,156	19.8	1,091	20.3

1/ Percentages do not always equal 100 because of omission of some counties for which level-of-living indexes were not obtained.

Educational Attainments

Figure 2 and table 3 show the relationship between the educational attainments of members of farm operator families and the farm operator's level of living. In counties with the highest level-of-living indexes, 38 percent of the persons in farm operator households 25 years of age and over had completed 12 years of school. This percentage decreased to a low of 15 percent in counties with the lowest indexes. On the other hand, in counties with the highest indexes, only 8 percent of those 25 years of age and over had completed less than 8 years of school, but in the quintile of counties with the lowest indexes 37 percent of those in this age group had completed less than 8 years of school. There is less difference between the two quintiles in the percentage of persons 25 years old and over who had completed 16 or more years of school -- 6 percent in the first quintile and 4 percent in the fifth quintile.

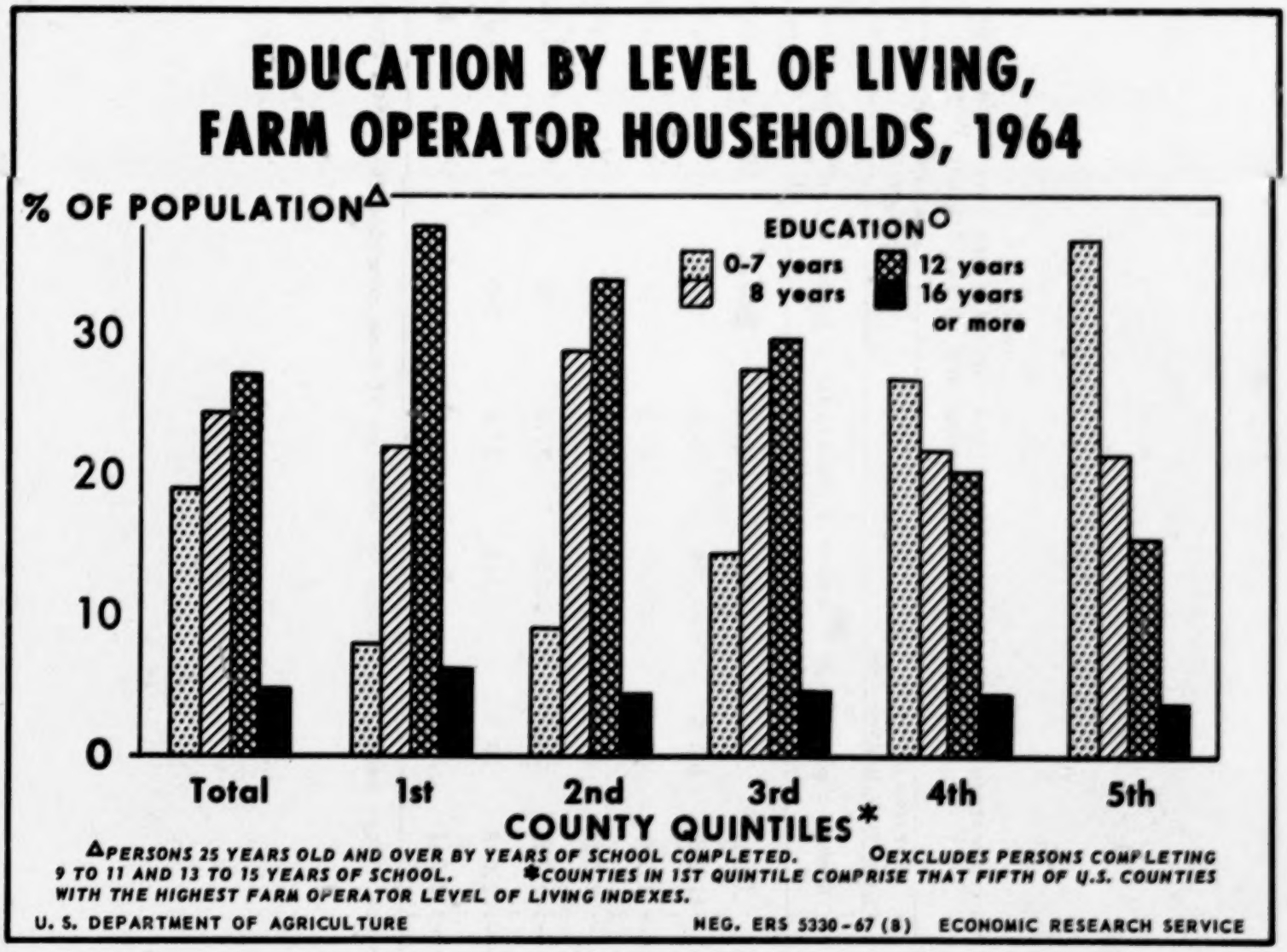
EDUCATION BY LEVEL OF LIVING, FARM OPERATOR HOUSEHOLDS, 1964
% OF POPULATION△
EDUCATION○
0-7 years
8 years
12 years
16 years or more
30
20
10
0
Total
1st
2nd
3rd
4th
5th
COUNTY QUINTILES*
△PERSONS 25 YEARS OLD AND OVER BY YEARS OF SCHOOL COMPLETED. ○EXCLUDES PERSONS COMPLETING 9 TO 11 AND 13 TO 15 YEARS OF SCHOOL. *COUNTIES IN 1ST QUINTILE COMPRISE THAT FIFTH OF U.S. COUNTIES WITH THE HIGHEST FARM OPERATOR LEVEL OF LIVING INDEXES.
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Figure 2

Table 3.--Percentage distribution of persons 25 years old and over in farm operator households in each quintile of counties, by years of school completed, 1964

Years of school completed	All counties	Quintile				
		1st	2nd	3rd	4th	5th
	Percent					
0-7 years	19.1	8.0	9.3	14.4	26.9	36.9
8 years	24.5	22.3	28.8	27.5	21.9	21.4
12 years	27.2	37.7	34.0	28.9	20.2	15.4
16 or more years	4.7	6.3	4.5	4.7	4.4	3.9

The general nature of the differences in the educational attainments of persons 25 years old and over in each of the quintiles may be seen more clearly by a tabulation showing the median years of school completed by these persons. The tabulation below shows that the median years of school completed by persons in counties of each of the quintiles decreases as the quintile rank becomes lower.

Item	Quintile					All persons
	1st	2nd	3rd	4th	5th	
Median years completed	11.12	10.34	9.39	8.16	7.61	9.11

Economic Class of Farm

Although less than one-fifth of all persons in farm operator households are in counties of the first quintile, over one-third of the farms in economic classes I, II, and III (annual sales of $10,000 or more) are located in these counties. One-fourth of the farms in classes IV, V, and VI (annual sales of $2,500 to $9,999) are located in counties of the fifth quintile. Over half of the part-time farms and 59 percent of the part-retirement farms are located in counties of the fourth and fifth quintiles (table 4). Since the fifth quintile has a larger proportion of persons 65 years of age and over than the other quintiles, it is not surprising that it has a third of the part-retirement farms.

Table 4.--Number and percentage distribution of all persons in farm operator households in each quintile of counties, by economic class of farm, conterminous United States, 1964

Quintiles of counties	All persons in farm operator households		Commercial farms				Part-time farms		Part-retirement farms	
			Classes I, II, and III		Classes IV, V, and VI					
	Number	Percentage of total	Number	Percentage of total	Number	Percentage of total	Number	Percentage of total	Number	Percentage of total
	Thou.	Pct. 1/	Thou.	Pct.	Thou.	Pct.	Thou.	Pct.	Thou.	Pct.
All counties	11,229	100.0	3,513	100.0	4,421	100.0	2,505	100.0	791	100.0
First quintile	2,206	19.6	1,266	36.1	610	13.8	260	10.4	70	8.9
Second quintile	2,389	21.3	1,008	28.7	904	20.5	375	15.0	102	12.9
Third quintile	2,309	20.6	667	19.0	921	20.8	568	22.7	154	19.5
Fourth quintile	2,068	18.4	350	10.0	889	20.1	629	25.1	200	25.3
Fifth quintile	2,247	20.0	219	6.2	1,094	24.7	670	26.8	263	33.3

1/ Percentages do not always equal 100 because of omission of some counties for which level-of-living indexes were not obtained.

POPULATION IN SELECTED COUNTIES

Of the 30 counties selected for a more detailed examination, 2/ the 10 with the highest indexes are in California and Arizona. The 10 with average indexes were selected from forty-six counties or combinations of counties in 22 States. These had a level-of-living index of 122, the same as the U.S. county average. Those with the lowest indexes are located chiefly in the Appalachian and Ozark regions. In 1964, the farm operator level-of-living indexes for the counties in the upper quintile ranged from 378 to 227; the indexes for the counties in the lowest ranged from 59 to 46.

Age

Farm operator households have fewer persons in the 20 to 24 age group than in any other age group. The largest proportion of persons in counties with the highest and in those with average indexes is between 45 and 54 years of age. Counties with the lowest indexes have the largest proportion 10 to 14 years old. Counties with average and the lowest indexes have a larger proportion of persons in the age group 65 years and over than the counties with the highest indexes. Counties with the lowest indexes have a higher proportion in the more dependent age groups, under 20 and 65 years of age and over, than those with the highest indexes.

Color

Seven of the 10 counties with the lowest indexes have no nonwhite farm operators, a fact which substantiates findings that there are many rural whites with very low incomes. 3/ Nevertheless, in these 10 counties, about one-fifth of the persons in the households of farm operators are nonwhite. In the counties with average indexes, there are only 209 nonwhite persons in these households, all of which are located in four counties. All of the counties with the highest indexes had nonwhite farm operators. They comprise 7 percent of all persons in farm operator households in these counties. Since these counties are in California and Arizona, the nonwhites include very few Negroes.

2/ The following counties are those selected for more detailed study: Counties with the highest indexes: Maricopa, Pinal, and Yuma, Ariz.; and Kern, Kings, Imperial, Monterey, Orange, Ventura, and Yolo, Calif. Counties with average indexes: Bacon, Ga., Bear Lake, Idaho, Greenwood, Kans., York, Maine, Montcalm, Mich., Ray, Mo., Butler, Pa., Bexar, Tex., Thurston, Wash., and Barron, Wis. Counties with the lowest indexes: Dallas, Ala., Fulton, Ark., Breathitt, Knox, Leslie, Letcher, Owsley, and Wolfe in Kentucky, Hancock, Tenn., and Buchanan, Va. These counties were analyzed in the statistical bulletin cited in footnote 1 of this report.

3/ Bird, Alan R., and McCoy, John L. White Americans in Rural Poverty. U.S. Dept. Agr., Agr. Econ. Rpt. 124, Nov. 1967.

Sex

Males outnumber females in each group of counties, but the difference is slight in counties with the lowest indexes. This can be shown by subtracting the percentage of females from the percentage of males. The difference is only 1.6 percentage points in counties with the lowest indexes, 3.4 in those with the highest indexes, and 7.2 in those with average indexes.

Economic Class of Farm

Great differences exist in the percentage of commercial farms of various economic classes located in the three groups of counties. Counties with the highest indexes have 62.8 percent of the class I, II, and III farms, compared with 24.4 and 2.4 percent, respectively, for counties with average and the lowest indexes (table 5).

In counties with average indexes, the proportion of persons on farms in classes IV, V, and VI is greater than that of persons on farms in classes I, II, and III in every county except York County, Maine. The proportion on part-time and part-retirement farms in these counties is greater than that in counties with the highest indexes.

Counties with average indexes and those with the lowest indexes have the same proportion of persons on part-time farms, but counties with the lowest indexes have a larger proportion of persons on part-retirement farms. Only seven of the counties with the lowest indexes have persons on farms in classes I, II, and III. In two counties in Kentucky, Leslie and Letcher, the largest number of persons live on part-time farms; there are no persons operating farms in classes I, II, and III.

Income

In this report, net farm income is that income from all farm products sold after deduction of specified expenditures as listed in the 1964 Census of Agriculture. The difference in the annual per capita net income of farm operators in each of the three groups of counties is very striking. Annual per capita net farm income is $15,340 in counties with the highest indexes, $1,170 in those with average indexes, and $293 in those with the lowest indexes (table 6). Large specialized irrigated farms account for the high net farm incomes in the counties with the highest indexes. Most pronounced are the differences in net farm income per household. In counties with the highest indexes, net farm income per household is more than 12 times that in those with average indexes and more than 46 times that in counties with the lowest indexes.

Among the three groups of counties, per capita "other-than-farm" income varies less than per capita net farm income. However, the three groups differ greatly in the ratio of "other" income to net farm income. In those with average indexes, per capita net farm income averages $149 more than other income; in counties with the lowest indexes it averages about three-fifths as much as other income. The difference in total per capita income (farm and other) of farm operators in each of the three groups of counties is also very

Table 5.--Number and percentage of persons in farm operator households in 3 groups of counties, by selected characteristics, conterminous United States, 1964

Item	Counties with the highest level-of-living indexes		Counties with average level-of-living indexes		Counties with the lowest level-of-living indexes	
	Persons	Persons as percentage of total	Persons	Persons as percentage of total	Persons	Persons as percentage of total
	Number	Pct.	Number	Pct.	Number	Pct.
Total population	42,265	100.0	49,544	100.0	34,453	100.0
Characteristics:						
Age						
Under 5 years	2,725	6.4	3,581	7.2	2,648	7.7
5-9	4,005	9.5	5,099	10.3	3,740	10.9
10-14	5,243	12.4	6,134	12.4	4,871	14.1
15-19	4,445	10.5	4,696	9.5	3,958	11.5
20-24	1,445	3.4	1,466	3.0	1,574	4.6
25-34	2,949	7.0	3,691	7.4	2,381	6.9
35-44	6,465	15.3	6,332	12.8	3,557	10.3
45-54	6,803	16.1	7,333	14.8	4,520	13.1
55-64	4,900	11.6	6,220	12.5	3,786	11.0
65 and over	3,285	7.8	4,992	10.1	3,418	9.9
Color:						
White	39,210	92.8	49,335	99.6	26,823	77.9
Nonwhite	3,055	7.2	209	.4	7,630	22.1
Sex:						
Male	21,842	51.7	26,553	53.6	17,507	50.8
Female	20,423	48.3	22,991	46.4	16,944	49.2
Class of farm:						
Commercial						
Classes I, II, III	26,546	62.8	12,076	24.4	817	2.4
Classes IV, V, VI	7,674	18.2	19,406	39.2	19,150	55.6
Part-time	6,612	15.6	14,187	28.6	9,862	28.6
Part-retirement	1,433	3.4	3,875	7.8	4,624	13.4

Table 6.--Net farm income and other-than-farm income in counties with the highest, the lowest, and average farm operator level-of-living indexes, conterminous United States, 1964

Item	Unit	Counties with highest indexes	Counties with average indexes	Counties with lowest indexes
Total persons	Number	42,265	49,544	34,453
Total households	do.	12,124	14,058	8,845
Net farm income 1/	Dollar	648,336,635	57,959,491	10,081,909
Per household	do.	53,475	4,123	1,140
Per capita	do.	15,340	1,170	293
Other than farm income 2/	do.	63,992,541	50,573,516	16,362,809
Per household	do.	5,278	3,597	1,850
Per capita	do.	1,514	1,021	475
Total income per household	do.	58,753	7,720	2,990
Total income per capita	do.	16,854	2,191	768
Ratio of net farm income to other income	do.	10.1	1.1	.6
Percentage of households with other than farm income	do.	69.8	84.8	81.4

1/ Farm sales less specified production expenses that were obtained from the 1964 Census of Agriculture.
2/ Household income from all sources except the farm actually operated in 1964.

striking. Total per capita income is $16,854 in the counties with the highest indexes, $2,191 in those with average indexes, and $768 in the counties with the lowest indexes.

In the counties with the highest indexes, 70 percent of the persons in farm operator households had other income. In the counties with average indexes and in those with the lowest, the percentage was higher -- 85 and 81 percent, respectively. In the 30 counties, the percentage of farm operator households having other income is lowest (53 percent) in Wolfe County, Ky., and highest (94 percent) in Letcher County, Ky. Both counties are in the group with the lowest level-of-living indexes. In the counties with average indexes, the percentage of families with other income varies less than it does in counties of the other two groups. The percentage of farm households per county with other than farm income ranged from 58 to 80, 79 to 92, and 53 to 94 percent in counties with the highest, average, and the lowest indexes, respectively.

IMPLICATIONS

The foregoing analysis has dramatized the great differences existing among farm operator households in counties grouped by the farm operator level-of-living index. Variation is so great that it is not wise to generalize about farm operator households. Conditions analyzed range from decided affluence to the depths of poverty. Given these pronounced differences in level of living, any economic or social development program for farm operator families must be designed carefully to make sure that those in greatest need receive benefits and that families standing well above the average are not antagonized.

Relatively deprived farm operator households, like other low-income families, are shown to have more older people, to be disproportionately nonwhite (though the larger proportion is white), to be educationally disadvantaged, and to be concentrated in certain regions of the country. These farm operator families, though they are to some degree self-employed and control some resources of production, nevertheless seem to be appropriate beneficiaries of anti-poverty programs.

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